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IMPROVING KENYA'S DOMESTIC HORTICULTURAL PRODUCTION AND MARKETING SYSTEM: CURRENT COMPETITIVENESS, FORCES OF CHANGE, AND CHALLENGES FOR THE FUTURE

VOLUME I:
HORTICULTURAL PRODUCTION

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LIST OF ACRONYMS

CIDA	Canadian International Development Agency
COMESA	Common Market for Eastern and Southern Africa
EAC	East African Community
EU	European Union
FAO	Food and Agriculture Organisation
FPEAK	Fresh Produce Exporters Association of Kenya
GDP	Gross Domestic Product
HCDA	Horticultural Crop Development Authority
IBR	Institute for Biotechnology Research
ICIPE	International Centre of Insect Physiology and Ecology
IFAD	International Fund for Agricultural Development
IGAD	Inter-Governmental Authority
JKUAT	Jomo Kenyatta University of Agriculture and Technology
KARI	Kenya Agricultural Research Institute
KBS	Kenya Bureau of Standards
KEPHIS	Kenya Plant Health Inspectorate Service
KFA	Kenya Farmers' Association
KFU	Kenya Farmers Union
KRA	Kenya Revenue Authority
KSC	Kenya Seed Company
MoALD	Ministry of Agriculture and Livestock Development
MRLs	Maximum Residual Levels
NCPB	National Cereals and Produce Board
NGOs	Non-Government Organizations
OPVs	Open Pollinated Varieties
PTA	Preferential Trade Area
QDS	Quality Declared Seed
SADC	Southern African Development Community
TAMPA I	Tegemeo Agricultural Monitoring and Policy Analysis
TFC	Tanzania Fertilizer Company
THRC	Thika Horticultural Research Centre
THRI	Tengeru Horticultural Research Institute
TOSCA	Tanzania Official Seed Certification Agency
TSC	Tanzania Seed Company
UK	United Kingdom
UNDP	United Nations Development Programme
USAID	United States Agency for International Development
WV	World Vision

Executive Summary

Kenya's horticultural sector (defined here to include fruit and vegetable production and marketing, but not flowers) has received a great deal of attention over the past decade due to the rapid and sustained growth of its exports to Europe. This impressive growth has undoubtedly contributed to increased rural incomes and reduced rural poverty in Kenya. Yet despite this growth, exports remain a small fraction of Kenya's overall horticultural sector. For the past decade, over 90% of all fruit and vegetable production was consumed domestically, and the domestic market accounted for over 90% of the total growth in quantity of fruit and vegetable production. While over 90% of smallholder farmers in all but the arid regions of Kenya produce horticultural products, fewer than 2% do so directly for export.

This overwhelming dominance of the domestic market, combined with slower growth experienced in the export sector over the past decade, the challenges that smallholders face to continue participating in the export sector, and the possibility of more rapid growth in domestic demand, all argue for a more active focus on the potentials and constraints of domestic horticulture in Kenya. Such a focus implies also the need to assess the competitiveness of local production and marketing against that of neighboring countries such as Tanzania and Uganda. This paper explores these key issues in three Volumes. The overall objectives of the three Volumes are to provide a broad diagnostic overview of the horticultural sector, to identify specific constraints that limit the system's performance, to make suggestions for selected policy and programmatic changes, and to identify key research that needs to be done to guide further investments to improve sector performance. Volume I – the present volume – focuses on the farm level, examining production and area trends, the role of horticultural production in farmer livelihoods, and farm level competitiveness with Tanzania. Volumes II and III focus, respectively, on domestic and regional marketing of horticultural products, and on technical research and regulatory issues.

The paper is organized as follows. Chapter 1 provides background and briefly discusses the data and methods used in the report. Chapter 2 focuses on production and yield trends for seven fruit and nine vegetable crops, and estimates the international export market share for vegetables. Chapter 3 uses household survey data to examine the role of horticultural production and sales in smallholder livelihood strategies, and evaluates the structure of production and marketing at the farm level. Chapter 4 develops partial farm budgets for onions in Tanzania and Kenya, to assess farm-level competitiveness of the two countries in this crop. Finally, Chapter 5 presents conclusions and recommendations.

Production and Yield Trends: Official production and yield data indicate that the yields of fruits in Kenya over the past decade have been stagnant with the exception of bananas, mangoes and passion fruits, which have risen. Production of banana has recovered dramatically after overcoming disease problems in the mid-1990s. Production of pineapples, mangoes, avocados, and passion fruit has also trended upwards while production of citrus, pawpaw, and "other fruits" has stagnated. Citrus greening disease is a persistent problem contributing to poor performance in that sector.

Production of cabbages and carrots has declined over the past decade, while kales, tomatoes and traditional vegetables show steady increases. Vegetable yields have been stagnant with the exception of French beans and indigenous vegetables, which have risen.

Using data from various sources for 1997-2001, we estimate that at least four- to five times more horticultural produce, by value, was sold in domestic markets than in international export markets. If produce consumed on the farm is included, the domestic share rises to 7-8 times that of the export market. Value added in domestic markets (post farm gate) was at least three times that in the export sector.

Horticulture in Smallholder Livelihood Strategies: Production and sales at the farm level of all the major horticultural crops in Kenya are quite concentrated. Fifteen percent of rural households account for about 80% of all horticultural sales. Concentration is higher for individual crops: in all but one of the top 10 crops, 5% of the rural population accounts for at least 50% of production and at least 70% of sales. Bananas and sukuma wiki are the least concentrated both geographically and at the household level. Improvements in production and marketing of these two crops would have the broadest impacts on income levels and poverty rates. Carrots, french beans, macadamia nuts and oranges are the most concentrated. For these crops, a private sector led strategy of focused assistance to relatively few growers on production and marketing constraints could be most effective in boosting production and sales. Such a strategy would not be effective in oranges unless the citrus greening problem is first addressed.

Households selling the most horticultural produce are better off than other households based on a wide range or indicators. Yet this group still earns a slightly higher income share off the farm than they do through horticultural sales, suggesting substantial continued income diversification. A potential implication is that, if marketing costs and market risk can be reduced and farm level productivity increased, this group of households may be well poised to take advantage of expanding market opportunities through greater specialization.

Regional Competitiveness: Marketing cost budgets (Volume II) show that Tanzanian oranges and, especially, onions are very competitive in the Kenyan market. Farm budgets for onion also demonstrate Tanzania's advantage in this crop: costs of production in that neighboring country are lower by 20-50%, gross margins per acre of land are higher by 60-300%, and gross margins per bag are higher by 15-150%. These results are driven by yields that are 45-100% higher in Tanzania and seed costs that are one-tenth those in Kenya. Higher quality of irrigation in that country may also contribute to Tanzania's advantage, and superior onion storage infrastructure at the farm level allows it to supply the Kenya market throughout the year.

Conclusions and Recommendations: Fresh fruit and vegetable production and marketing value chains are becoming increasingly important to a broad array of Kenyan consumers. These also hold potential market opportunities for important segments of the smallholder farming community. Expanding domestic and regional markets for Kenyan horticultural produce and integrating the country's smallholder farmers into profitable supply chains that satisfy these markets will require investment in three key areas: technical production constraints, "hard" and "soft" market infrastructure, and the legal and regulatory environment. Recommendations regarding technical production constraints (the focus of this Volume) focus on consolidating the country's success in reducing banana diseases, dealing with citrus greening disease in a cost effective manner, and improving adaptive varietal research in the context of a revised seed law that encourages the production of Quality Declared Seed at the village level.